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Abstract

This paper analyses the effects associated with using the magnitude of realised loan losses as a basis for performance measurement and compensation to credit risk team in banks. Paying and rewarding credit risk professionals on the basis of reporting fewer provisions or lower loan losses motivate credit risk teams to game the system that work to determine loan loss provisions estimate of banks. While bank credit risk teams are sometimes mesmerised by the short-term benefits of provisions games, they do not care if their behaviour destroys bank value and the informativeness of loan loss provisioning estimates. While it is not difficult for bank managers and analysts to understand that the provisioning process is subject to gaming, few of them understand the costs it pose on banks and how to lower this costs. This paper explains how this happens and how provisions games can be stopped or reduced. Using the magnitude of loan losses as a basis to determine the compensation to risk professionals or credit risk teams encourages provisions games. The solution is not to reduce or eliminate provisioning discretion of credit risk teams but rather to de-link credit risk teams' bonuses from the magnitude of loan loss.

Keywords: Provisions Games; Loan Loss Provisions; Bank Professionals, Credit Risk; Banks.

JEL classification: G21; G28; M14; M52; G32; G35.

1. Introduction

Loan loss provision or provision for bad debt is important to the credit risk management function of lending institutions because loan loss provisions is a key input for credit risk management across many lending institutions, hence, the importance of loan loss provisions to lending institutions cannot be overemphasized. In practice, loan loss provisions estimate in a given period is subject to manager's discretion, and reported provisions estimate is management's best estimate of expected losses on the overall loan portfolio. While loan loss provision is important to any lending institution regardless of its size or complexity, the reality is that the current loan loss provisioning system in some lending institutions reward risk professionals that understate provisions to signal lower expected loan loss even in periods when credit risk exposure is high, and punish risk professionals that overstate provisions to signal high expected loan loss during bad economic times even though the latter should be the appropriate provisioning behaviour under the current loan loss provisioning model¹. As a general principle, credit risk teams (or risk professionals) understand that lower provisions estimate is better because lower provisions signals low expected loan losses which in turn improves the overall earnings of banks. Yet credit risk teams that keep fewer provisions during good times and significantly increase provisions during bad times get punished for doing the latter and receive fewer bonuses or may even get fired when higher provisioning during bad times adversely reduce bank earnings and worsen the condition of the bank². Should credit risk teams be punished for increasing provisions during bad economic times if increased provisions depletes bank earnings during bad economic periods? If credit risk teams feel they will be punished for doing so, they will have weak incentive to report the true provisions estimate that is commensurate with the credit risk in the economic and business environment. Motivated by this concern, this paper presents a viewpoint on

¹ The current IAS 39 provisioning model is the incurred loss model which requires bank managers to allocate loan loss provisions to loans only when a loss has been incurred or when a loss is highly probable, that is, when there is objective evidence for actual loan loss (Gaston and Song, 2014).

² The current loan loss provisioning model is criticised by academics and policy makers because it delays provisions until it is too late (see. Laeven and Majnoni, 2003; Bikker and Metzmakers, 2005; Bushman and Williams, 2015; Beatty and Liao, 2011). The implication is that when banks significantly increase provisions when a recession sets in, the increased provisions will significantly reduce bank profit during the recession and further worsen the condition of the bank during the recession.

this issue and argue that bank professionals will game the loan loss provisioning process in a way that increases the likelihood of receiving the promised bonus and to save their job.

The discussion in this paper contributes to the loan loss provisioning literature by providing insights into the behaviour of credit risk teams and managers which we called ‘risk professionals’ in this paper. Although empirical studies on loan loss provisions document some evidence that loan loss provisions estimates are manipulated for several reasons other than credit risk considerations (e.g. Ahmed et al, 1999; Lobo and Yang, 2001; El Sood, 2012; Ozili, 2015, 2017), the data in such studies say nothing about the squabble that occur among risk professionals (or credit risk teams) in the process of making decisions about the level of loan loss provisions to be reported in the current period. This study, in contrast, provides a viewpoint on the behavioural component of the decisions regarding bank provisions. Insights in this paper may be useful to bank supervisors who want to gain some understanding on how credit risk teams manipulate loan loss provisions in ways that make bank provisions too insufficient to cover loan loss to bank loan portfolio during stress economic periods.

The paper is organised as follows. Section 2 provide a theoretical context to rewarding employees. Section 3 present a background to loan loss provisions and provide a discussion on provisions games. Section 4 highlights the consequence of provisions games. Section 5 provides a suggestion on how to stop provisions games. Section 6 concludes.

2. Rewards to Employees: A Case in Theory

A CEO that knows how to reward good performance in the organization will design a reward or bonus system that rewards good performance. If this is the case, the CEO will consider the following issues when designing a good reward system. Some of these issues as suggested by Locke (2004) includes: how pay should be tied to performance? How employees should be stopped from short-cutting or cheating in order to get their bonus? Which specific actions or outcomes should be rewarded with bonuses and which should not? What will be the consequence of incentives on actions or outcomes

that are not included in the incentive plan? Can employees actually manage or control the actions or outcomes that are tied to rewards? What do you do when market conditions change radically and make the incentive system ineffective or meaningless? (See. Locke, 2004). In principle, the problems regarding incentives to employees is mostly associated with lack of clear goals. For instance, the goal-setting theory firmly assert that people must have goals that are both clear and challenging to motivate high performance (Locke and Latham, 1990). While it is true that it is difficult to motivate employees without goal-setting tied to rewards (Locke 2001), the art of combining goal setting with rewards can be very problematic in practice for several reasons. For example, let's consider four methods of rewarding employees in the context of goal setting and identify the weakness of all four methods. The first method is to assign difficult or challenging goals to employees and reward them with substantial bonus if they are able to reach the goals and no bonus if they do not (Locke, 2004). The advantages of the method is that it provides strong incentive for employees to attain goals and it leaves no ambiguity about what is required of the employee to receive the bonus (Locke, 2004). However, the weakness of this method is that employees can become obsessed with goal attainment that they are tempted to use short-cut to attain goals in order to receive the bonus while ignoring the consequences of their behaviour on the firm in the long term (Locke, 2004). Obviously, this weakness can be reduced by designing rules of conduct that define ethical norms or standards that should guide employees in the process of goal attainment. The second method involves setting multiple goals and with different levels of rewards in a way that employees that achieve the highest (lowest) goal receives the highest (lowest) reward compared to the previous case where employees either receive a bonus or do not receive any bonus (Locke, 2004). The advantage of this method is that it reduces the temptation for employee to cheat or use short-cuts to attain goals because even if employees do not attain the highest goal, employees can expect to receive some reward at the very least (Locke, 2004). The weakness of this method is that the use of multiple goals can be less motivating to employees as some employees will become highly motivated and other will be less motivated because some employees will prefer to choose easy-to-attain goals (Locke, 2004). To correct this, the CEO may set some minimum goal below which performance is considered inadequate or unacceptable (Locke, 2004). The third method is to design a linear pay-for-performance system with some increment or non-linearity (Jensen, 2003).

Jensen (2003) suggest that employees should be rewarded for their actual performance and receive additional rewards up to the amount that exceeds the minimum goal threshold. The advantage of this approach is that employees will get paid for what they actually achieved and will be paid for any extra effort they put to exceed the performance threshold. In this sense, employees will have little or no incentive to game or lie to attain goals. The only apparent weakness of this approach is that employees may have weak incentives to exceed goal thresholds if they know they will be rewarded for what they actually achieved. The fourth method suggested by Latham and Mann (2006) suggest that employees should be given specific and challenging goals but the decision about bonus to employees should depend on relevant context factors such as: how much was actually achieved by the employees, how the company as a whole performed in the period, how difficult the goals were under existing resource constraints and fluctuating market conditions, how ethical were the actions of employees while attaining the goal, etc. The advantage of this method is that it rewards hard work even if goals are not met, that is, employees that work hard under difficult circumstances and do not attain the goal but act ethically in pursuit of the goal will be rewarded, nevertheless. The disadvantage of this approach is that it requires the CEO or the remuneration committee to be knowledgeable about the full context and relevant factors that affect each employee's goal attainment circumstances in order to minimize favouritism or bias under this method.

3. Loan Loss Provisions and Provisions Games

3.1. Provision for Loan Loss

Banks and lending institutions issue loan to individuals and corporate borrowers, and face the risk that the borrower will not pay the amount, principal or interest on the loan facility. To mitigate this risk, banks will set aside an estimated amount in anticipation of default in the repayment of the amount, principal or interest. In financial accounting, this estimated is termed 'loan loss provisions' or 'provisions for bad debt'. After assigning a credit quality grade to each loan category, the manager will use the information provided by the credit risk team (mainly information about borrower characteristics) to decide on the level of provisions to be reported for the period (Angklomkliew et al,

2009). The greater the credit risk associated with the loan portfolio, the higher the provision estimates, and vice versa. Also, banks will keep more provisions estimates during bad economic periods because borrowers will find it difficult to repay loans due to unfavourable economic conditions and vice versa (Laeven and Majnoni, 2003). Once the level of provision is determined, it is charged as an expense to the income statement and reflected as an addition to loan loss reserves in the asset-side of balance sheet at the end of the period. Because loan loss provision is charged to the income statement of banks, the level of provisions should have some influence on the overall earnings and equity capital of banks. Recently, a Bloomberg 2016 report show that the Chinese government plan to loosen the strict requirements for loan loss provisions to help Chinese banks report higher profit levels. Also, Reuters 2016 report that Greece national bank of Greece became profitable after substantial reduction in loan loss provisions of the bank. In May 2016, the Bank of New Zealand witnessed 83 percent increase in loan loss provisions and contributed to a 3.3 percent decline in cash earnings.³ Also, bank supervisors around the world are concerned that high provisions can wipe out bank profit and increase the risk of systemic failure to the banking system as a result of the procyclicality of loan loss provisions, and this was the case during the recent global financial crisis. In the middle of the financial crisis, banks overstated loan loss provisions estimates which further reduced bank profit and worsening the condition of banks during the period.

3.2. Bonus and Provisions

Having established how lending institutions report loan loss provisions estimates and the economic implication of high and low loan loss provisions estimates, let's examine how credit risk teams might be rewarded through provisions estimates that signal the losses banks expect from their lending activities.

Assume that the CEO of a bank is able to identify departments or units whose functions significantly contribute to meet earnings target for the current. At the beginning of the period, the CEO promises a bonus to unit managers whose functions are crucial to meet the earnings target for the period. The

³ <http://www.nznewsuk.co.uk/business/?id=70612&story=Bank-of-NZ-bad-debt-provision-jumps-83->

credit risk management unit is one of such unit because (i) they manage losses associated with bank loan portfolio, and (ii) they strive to eliminate credit risk and minimise loan losses, where possible, because expected loan losses⁴ reduce bank overall earnings when charged to the income statement. After the CEO and the chief risk officer (CRO) agree and set the maximum and minimum threshold of loan loss provisions for the period, the CRO informs the credit risk team about the provisions threshold and will require credit risk teams to report low provisions by minimising expected loan losses in the current period under the assumption that lower loan losses will require fewer provisions estimates. The CRO will also inform credit risk teams that the bonus they will receive is tied to how much provisions they realise, that is, they will receive higher rewards for reporting fewer provisions due to low loan losses and receive little or no rewards if provisions estimates are high due to high loan losses. While we admit that credit risk teams may not have control over factors that lead to loan losses, however, we assume that the provisions threshold set by the CEO and CRO will take into account all relevant factors that are beyond the control of credit risk teams to ensure that the provisions thresholds are attainable.

When the bonus credit risk teams expect to receive is linked to reporting fewer loan losses in each period, reported provision estimate will be partly driven by bonus incentives because credit risk teams understand that the bonus they will receive depend on the level of reported provisions in the period. In other words, they understand that lower provisions imply fewer expected loan losses which improves net interest margin and overall earnings, and increases the likelihood of receiving the promised compensation that is also linked to the size of bank earnings. In this sense, risk professionals or credit risk teams are able to link the bonus they expect to receive to the level of reported provisions. This link is an inverse relationship and can be expressed as:

Bonus to credit risk teams = f (reported provisions estimate) - Inverse Function

⁴ 'Expected' loan losses that eventually become 'actual' loan losses are charged to the income statement while 'unexpected loan losses' are absorbed by bank equity capital. The consequence of the latter is that it depletes bank capital and leads to loss of value to shareholders.

Derived from⁵:

Bonus to bank risk teams = f (size of overall earnings)

Size of overall earnings = f (level of reported provisions/bad debt written-off)

Therefore,

Bonus to bank risk teams = f (reported provisions estimate)

3.2.1. Tell the Truth and Get Punished

Credit risk teams (or risk professionals) will faithfully use loan loss provisions estimates to communicate the true underlying reality of the credit risk associated with the loan portfolio of the bank if telling the 'truth' do not reduce the likelihood of receiving their bonus or increase the risk of losing their job. Consider the previous example. At performance meetings, the performance target for each department/unit in the bank is laid out with a clause that the bonus to each unit (and its members) depend on how each unit's performance contributes to improve bank profitability in the current period.⁶ In some cases, this compensation/bonus plan is often implied rather than explicitly laid-out. Credit risk teams will carefully consider how reporting the true provisions estimate might affect the likelihood of receiving their bonus or losing their job. If they choose to report provisions that reflect the true economic reality of the bank, then provisions will be high particularly during volatile economic periods often associated with higher expected loan losses. If credit risk teams choose to accept the consequence of faithfully reporting the true economic reality underlying bank provisions during bad economic periods, then higher provisioning will further lower bank profit and make it more probable that they lose their bonus and/or lose their job. If credit risk teams do not care about the consequence of faithful reporting, they will faithfully report the 'truth' about provisions and face the risk of being punished.

⁵ The model show that bonus to credit risk teams depend on the size of bank earnings which in turn depend on the size of bank provisions and/or bad debt written-off. The inverse relationship implies that higher provisions will decrease the likelihood to receive their bonus and vice versa.

⁶ Locke (1978) demonstrates that goal-setting by assigning performance targets to employees is essential to motivate employees in organisations.

3.2.2. Lie and Be Rewarded

Credit risk teams who run the risk of losing their jobs or losing the promised bonus will find ways to report fewer provisions, and find some justification for doing so, because they fear that overstating provisions during bad economic times will signal high loan loss and attract sanctions from the CEO or may risk being fired because it will be assumed that the credit risk team did not anticipate losses on time to reduce lending to high risk areas. The need to preserve their jobs would discourage credit risk teams from reporting the true provisions estimate that is commensurate with expected loan loss during bad economic periods. Hence, credit risk teams will rather lie about the facts by reporting provision estimates that are not commensurate with expected loan loss to increase the likelihood of receiving the bonus.

Also, some credit risk teams understand that the CRO have discretion to increase or decrease initial provisions estimate to make it align with the provisions threshold for the period. In this case, credit risk teams can intentionally report high provisions during bad times with the expectation that the CRO will moderate or lower the initial provisions estimate. When the CRO adjusts the initial provisions estimates, the CRO informs the CEO that the credit risk unit's initial provisioning estimate would have lowered overall bank profit if the estimate was not adjusted (by the CRO). Because credit risk teams do not like the negative publicity that comes with being singled out as the unit that did not improve bank profit in the current period, they will avoid the negative publicity by rather reporting low provisions during bad economic times with the expectation that the CRO will increase the provisions estimate in response to contemporaneous credit risk concerns in the economy as the CRO see fit, particularly, if the CRO feel that provisions estimates is too low. The practice of intentionally understating or overstating provisions estimates with the expectation that that the CRO will moderate the provisions estimates constitute provisions games. Often, such provisions games which is followed by subsequent counter-adjustments by the CRO contributes to insufficient bank provisioning that bank supervisors around the world worry about. Taken together, (i) the expectation that reporting high provisions decreases bank earnings and reduces the likelihood of receiving the promised bonus, and (ii) the expectation that the chief risk officer will counter-adjust initial provisions estimates to align

with some pre-set provisions threshold motivates credit risk teams to engage in provisions games by manipulating provisions estimate in such a way that reported provisions increases the likelihood of receiving the associated bonus tied to bank provisions or the magnitude of loan losses in a given period. In the end, the final reported provisions will be misleading and will not reflect the expected loss associated with bank's loan portfolio. When this is the case, credit risk teams that manipulate provisions estimate to receive the associated bonus are in fact rewarded, and are paid to lie, and are paid to lie about their lying.

4. Consequence of Provisioning Games

4.1. Withheld Borrower Information

Credit risk teams have borrower-specific information that is crucial to determine the appropriate level of provisions to bank loan portfolio in the current period. The presence of bonus schemes linked to the magnitude of loan losses (and subsequently provisions) would motivate credit risk teams to withhold crucial credit risk-related information if incorporating such information into the loan loss provision process will yield abnormal provisions estimates that lowers the likelihood of receiving their promised bonus for the period. Hence, crucial borrower information is either intentionally ignored or hidden from the loan loss provisioning process. When unexpected losses arise due to withheld credit risk information, such (unexpected) losses will be absorbed by bank capital and may significantly deplete bank capital and lead to loss of value to bank shareholders. In a nutshell, provision games leads to non-disclosure or withheld credit risk-related information that leads to loss of value to bank shareholders.

4.2. Dishonesty

Lying about the facts and concealing critical information about expected loan loss so that reported provisions increase the likelihood of receiving the promised bonus is dishonest and erodes honesty throughout the loan loss provisioning process. Such dishonesty also spreads to other risk management unit of the bank such as the market risk unit and interest rate risk unit if they face similar bonus

incentive. The implication is that the entire risk management process of banks and lending institutions will have weak incentives to faithfully report all relevant and critical information that reveal the true risk exposure of the bank. Rather, risk professional will be driven by the need to lie about facts, if lying about risk keep provisions low and keep earnings high and increases the likelihood of receiving bonuses. Credit risk teams often get so wrapped up in the dishonest loan loss provisioning process that even though some individuals in the credit risk team dislike the provisioning process and perceive the destructive effect of this practice on future profitability of the bank, they will offer little or no resistance to such practice because they do not want to risk losing their bonus or their jobs.

4.3. Lying about the Lie

While manipulating risk numbers (including provisions estimates) to receive bonus is not uncommon in the banking industry, credit risk teams may deny that this dishonest behaviour is going on by ‘lying about their lying’. By ‘lying about their lying’, I mean that they will find an ex-post explanation to justify their ex-ante lie, that is, they will give a current economic explanation⁷ to justify their provision games. This behaviour misleads the chief risk officer (CRO) to believe a lie by accepting the manipulated provisions estimate. The CRO’s acceptance of the manipulated provision estimates will also mislead the CEO who in turn will mislead the board of directors who in turn will mislead shareholders about the true risk of the firm, and mislead users of bank financial statement.

5. How to Stop Provisions Games

The key to stop provisions games is not to eliminate the provisioning system that overstate provisions during good times and understate provisions during bad times (i.e., the dynamic provisioning system) because such provisioning system is needed to reduce the cyclical effect of bank provisions during unfavourable economic conditions (see, Saurina, 2009; Perez et al, 2008). Also, the key to stop provisions games is not to discourage goal setting for risk professionals that is based on achieving

⁷ Credit risk teams sometimes opportunistically find events in the business environment or economic environment to justify their actions to the CRO.

lower risk or fewer bank losses or provisions. Rather, the key to correct provisions games is to change the way risk professionals or credit risk teams are compensated based on the magnitude of realised loan losses which is communicated through the size of provisions estimates. Rewards to credit risk teams should be linked to other benchmark other than magnitude of loan loss. If rewards to credit risk teams are linked to other benchmark other than magnitude of loan loss, then the provisioning process will generate provisions estimates that are purely driven by credit risk considerations and credit risk teams will be willing to incorporate all known borrower information to the provisioning process without needing to conceal any relevant information. While it is true that it is difficult to motivate credit risk teams without using performance benchmarks that they are not responsible for, the motivation however should not be a bonus scheme linked to the magnitude of loan losses because such system rewards those who underestimate (or lie about) loan loss to receive bonus even though they lied to do so and punish those who do not lie about provisions estimates when telling the truth will risk losing their job or bonus. Hence, there is a need to de-link bonuses from the magnitude of loan loss in order to eliminate or weaken the incentive to lie through provision games.

6. Conclusion

This paper show that bank credit risk teams that faithfully report the true economic reality of loan loss provisions are more likely to be punished when higher provisions significantly decrease bank profit during bad economic periods while credit risk teams that engage in provisions games are more likely to be rewarded because credit risk teams will game the system to increase the likelihood of receiving the promised bonus and also to save their jobs. While loan loss provisions is not the only credit risk management tool in the credit risk management system of banks, loan loss provisions is central to banks' credit risk management. Because provisions is important, bank managers have incentives to control and influence the level of provisions estimate; and this incentive will either be driven by fundamental factors in the absence of bonus incentives or would be driven by bonus incentives when bonus plans are present. Going forward, banks may also game the entire credit risk management system by using several techniques. This paper provides a discussion for one technique: loan loss

provisions. Insights in this paper may be useful to bank supervisors to gain some understanding on how credit risk teams game the loan loss provisioning process to report provision estimates that are insufficient to withstand adverse shocks to bank loan portfolio.

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